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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
ORTIZ, BELIX M	

ART UNIT	PAPER NUMBER
2164	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/010,371	HRLE ET AL.	
	Examiner	Art Unit	
	Belix M. Ortiz	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1,4-9,12-17 and 20-27 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1, 4-9, 12-17, 20-27 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. In response to communications files on 4-April-2005, claims 2-3, 10-11, and 18-19 are cancelled; claims 25-27 are added; the specification of the disclosure, and claims 1, 4-5, 9, 12, 14-15, 17, and 20-23 are amended per applicant's request. Therefore, claims 1, 4-9, 12-17, and 20-27 are presently pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4-9, 12-17, and 20-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Ponnekanti (U.S. patent 6,606,626).

As to claim 1, Ponnekanti teaches a method for reducing lock contention of concurrent transactions on a plurality of rows of a table in a relational data base system in response to a database query having a set of predicates (see column 2, lines 30-32; column 3, lines 1-9; column 3, lines 26-28; and column 20, lines 8-13), the method comprising the steps of:

(a) scanning all rows of the table within an access range determined by the query (see column 9, lines 59-62; column 9, lines 66-67; and column 10, lines 1-2), wherein the scanning step (a) further comprising the step of:

(a1) accessing the rows of the table with uncommitted read semantics, wherein the accessing is performed through any current locks on the row (see abstract; column 12, lines 46-49; and column 16, lines 53-56);

(b) evaluating each scanned row to determine whether the row satisfies the set of predicates (see column 10, lines 1-4), wherein the step of evaluating (b) include

(b1) determining that a particular row does not satisfy the set of predicates of the query (see column 3, lines 2-7 and column 3, lines 53-65); and

(b2) skipping the particular row, including skipping the particular row when a lock is currently held on the particular row and an update on the particular row is being performed while the lock is held, and continuing the scan (see column 4, lines 3-10; column 4, lines 15-18; and column 4, lines 27-30).

As to claim 4, Ponnekanti teaches wherein the returning step (b3) further comprises the steps of:

requesting a lock on the row that satisfies the set of predicates (see column 3, lines 46-50 and column 3, lines 62-63);

suspending the scan, if the requested lock is refused (see column 4, lines 10-11);

repeating the request for a lock and re-evaluating the row when the lock is permitted (see column 12, lines 52-54 and column 12, lines 61-67); and

returning the row if the row still satisfies the set of predicates of the query (see column 3, lines 62-63).

As to claim 5, Ponnekanti teaches wherein the returning step (b3) further comprises the step of:

releasing the lock, skipping the row, and continuing the scan if the row no longer satisfies the set of predicates of the query (see column 16, lines 42-62).

As to claim 6, Ponnekanti teaches wherein the returning step (b3) further includes the step of:

returning the row as a result set (see column 3, lines 62-63).

As to claim 7, Ponnekanti teaches wherein the returning step (b3) further includes the step of:

returning the row if the row is a committed row (see column 15, lines 8-10).

As to claim 8, Ponnekanti teaches wherein the database query is a SQL statement (see column 1, lines 65-67).

As to claim 9, Ponnekanti teaches an apparatus for reducing lock contention of concurrent transactions on a plurality of rows of a table in a relational data base system in response to a database query having a set of predicates (see figure 1A; column 2, lines

30-32; column 3, lines 1-9; column 3, lines 26-28; and column 20, lines 8- 3), comprising:

means for scanning all rows of the table within an access range determined by the query (see column 9, lines 59-62; column 9, lines 66-67; and column 10, lines 1-2), wherein means for the scanning further comprising:

means for accessing the rows of the table with uncommitted read semantics, wherein the accessing is performed through any current locks on the rows (see column 12, lines 46-49 and column 16, lines 53-56);

means for evaluating each scanned row to determine whether the row satisfies the set of predicates (see column 10, lines 1-4), wherein the means for evaluating include:

means for determining that a particular row does not satisfy the set of predicates of the query (see column 3, lines 64-65); and

means for skipping the particular row, including skipping the particular row when a lock is currently held on the particular row and an update on the particular row is being performed while the lock is held, and continuing the scan (see column 3, lines 62-65; column 15, lines 11-13; and column 16, lines 42-44).

As to claim 12, Ponnekanti teaches wherein the means for returning step further comprising:

means for requesting a lock on the row (see column 3, lines 46-50);

means for suspending the scan, if the requested lock is refused (see column 4, lines 10-11);

means for repeating the request for a lock and re-evaluating the row when the lock is permitted (see column 12, lines 52-54 and column 12, lines 61-67); and

means for returning the row if the row still satisfies the set of predicates of the query (see column 3, lines 62-63).

As to claim 13, Ponnekanti teaches wherein the means for returning step further includes means for releasing the lock, skipping the row, and continuing the scan if the row no longer satisfies the set of predicates of the query (see column 16, lines 42-62).

As to claim 14, Ponnekanti teaches wherein the returned row is returned as a result set (see column 3, lines 62-63).

As to claim 15, Ponnekanti teaches wherein the row returned is a committed row (see column 15, lines 8-10).

As to claim 16, Ponnekanti teaches wherein the database query is a SQL statement (see column 1, lines 65-67).

As to claim 17, Ponnekanti teaches a computer readable medium containing programming instructions for reducing lock contention of concurrent transactions on a plurality of rows of a table in a relational data base system in response to a database query having a set of predicates (see column 2, lines 30-32; column 3, lines 1-9; column

3, lines 26-28; column 6, lines 66-67; column 7, lines 1-9; and column 20, lines 8-13), the programming instructions for:

(a) scanning all rows of the table within an access range determined by the query (see column 9, lines 59-62; column 9, lines 66-67; and column 10, lines 1-2), wherein the scanning instruction (a) further comprising the instruction for:

(a1) accessing the rows of the table with uncommitted read semantics, wherein the accessing is performed through any current locks on the rows (see column 12, lines 46-49 and column 16, lines 53-56);

(b) evaluating each scanned row to determine whether the row satisfies the set of predicates (see column 10, lines 1-4), wherein the instruction for evaluating (b) further comprises the instruction for:

(b1) determining that a particular row does not satisfy the set of predicates of the query (see column 3, lines 2-7 and column 3, lines 53-65); and

(b2) skipping the particular row, including skipping the particular row when a lock is currently held on the particular row and an update on the particular row is being performed while the lock is held, and continuing the scan (see column 4, lines 3-10; column 4, lines 15-18; and column 4, lines 27-30).

As to claim 20, Ponnekanti teaches wherein the returning step instruction (b3) further comprises the instruction for:

requesting a lock on the row (see column 3, lines 46-50);

suspending the scan, if the requested lock is refused (see column 4, lines 10-11);

repeating the request for a lock and re-evaluating the row when the lock is permitted (see column 12, lines 52-54 and column 12, lines 61-67); and

returning the row if the row still satisfies the set of predicates of the query (see column 3, lines 62-63).

As to claim 21, Ponnekanti teaches wherein the returning instruction (b3) further comprises the instruction for:

releasing the lock, skipping the row, and continuing the scan if the row no longer satisfies the set of predicates of the query (see column 16, lines 42-62).

As to claim 22, Ponnekanti teaches wherein the returning instruction (b3) further includes the instruction for:

returning the row as a result set (see column 3, lines 62-63).

As to claim 23, Ponnekanti teaches wherein the returning instruction (b3) further includes the instruction for:

returning the row if the row is a committed row (see column 15, lines 8-10).

As to claim 24, Ponnekanti teaches wherein the database query is a SQL statement (see column 1, lines 65-67).

As to claim 25, Ponnekanti teaches wherein the step of evaluating (b) includes

(b3) determining that a row satisfies the set of predicates of the query, and returning the row (see column 3, lines 62-63 and column 4, lines 21-22).

As to claim 26, Ponnekanti teaches wherein the means for evaluating includes means for determining that a row satisfies the set of predicates of the query, and for returning the row (see column 3, lines 62-63 and column 4, lines 21-22).

As to claim 27, Ponnekanti teaches wherein the instruction of evaluating (b) includes instruction for:

(b3) determining that a row satisfies the set of predicates of the query, and returning the row (see column 3, lines 62-63 and column 4, lines 21-22).

Response to Arguments

4. Applicant's arguments filed 4- April- 2005 with respect to the rejected claims in view of the cited references have been fully considered but they are not found persuasive:

In response to applicants' arguments that "Ponnekanti, fail to teach or suggest skipping a non-satisfying row, including when a lock currently held on that row and an update on that row is being performed while the lock is held", the arguments have been fully considered but are not deemed persuasive, because Ponnekanti teaches "If, however, the data

does not qualify ("no" case), the row is instead skipped, as the row will never qualify" (see Ponnekanti, column 3, lines 62-65).

"If no conflict is found, the "lock instant" request will be granted and the client will know that the "delete" has committed. Accordingly, the row may be skipped as the row is "deleted" (and that deletion has been committed)", (see Ponnekanti, column 4, lines 6-10).

"On the other and, if the data does not qualify ("no" case), the method may proceed to skip the row as it will never qualify (even if the "delete" rolls back) ", (see Ponnekanti, column 4, lines 16-18).

"If the "update" has committed (i.e., the "lock instant" request can be granted), the row is skipped (since, recall, the data does not qualify the scan criterion) ", (see Ponnekanti, column 4, lines 27-30).

"If, however, the data does not qualify ("no" case), the row is instead skipped, as the row will never qualify, as indicated by step 322", (see Ponnekanti, column 15, lines 11-13).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Belix M. Ortiz whose telephone number is (571)-272-4081. The examiner can normally be reached on moday-friday 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on (571)- 272-4083. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

bmo

May 12, 2005.

SAM RIMELL
PRIMARY EXAMINER